

SIGMA®



BIOCHEMICALS ORGANIC COMPOUNDS AND DIAGNOSTIC REAGENTS

TO PLACE AN ORDER

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GENERAL INFORMATION

APPLIED
LIFE

BIOTECH
REAGENTS

DIAGNOSTIC
REAGENTS

DIAGNOSTIC
REAGENTS

DIAGNOSTIC
REAGENTS

DIAGNOSTIC
REAGENTS

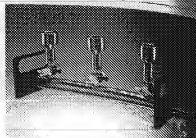
DIAGNOSTIC
REAGENTS

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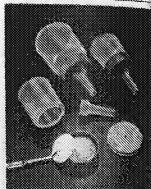
DIAGNOSTIC
REAGENTS

ATION

FILTRATION

PRODUCT
NUMBER

VACUUM MANIFOLD, Halgonex
Stainless steel with PTFE stopcocks. Designed with three vacuum ports and with a two-way valve and vent. Barbed fitting, 3/8" (9.5 mm) I.D. tubing. Autoclavable.



ANALYTICAL TEST FILTER FUNNEL, Halgonex
Sterile, with 47 mm nitrocellulose membrane. Funnel body is polypropylene with polystyrene collar. Cells used in standard vacuum manifolds or filter faces. Funnel and collar separate for removal of membrane.

- 2536** Membrane: 0.2 μ m, white
Funnel capacity: 100 ml 50 / pkg 127.30
- 2286** Membrane: 0.2 μ m, white
Funnel capacity: 250 ml 50 / pkg 127.30
- 2161** Membrane: 0.45 μ m, gridded
Funnel capacity: 100 ml 50 / pkg 127.30
- 2411** Membrane: 0.45 μ m, gridded
Funnel capacity: 250 ml 50 / pkg 127.30

FILTER MEMBRANES, NITROCELLULOSE

Biologically inert nitrocellulose membranes containing a small amount of cellulose acetate for improved handling.
Autoclavable to 121°C; use below 75°C.
Densely compatible with glues and bases, hydrocarbons, non-polar liquids.
See also Immobilon-NC in the Electrophoresis Equipment section for nitrocellulose blotting membranes.
Miliopore and TF Miliopore are registered trademarks of Millipore Corp.

Product Number	Pore Size (μ m)	Diameter (mm)	Pkg	Price US \$
N 9385	0.22	13	100	42.30
N 9385		25	100	45.35
N 9645		47	100	65.95
N 9770		142	50	162.75
N 9667		250	25	162.85
N 9885	0.45	13	100	44.30
N 9885		25	100	37.10
N 9145		47	100	66.95
N 9170		142	50	162.75
N 9645		250	25	162.85
N 9322	0.65	25	100	50.50
N 9147		47	100	72.25
N 9172		25	100	46.95
N 9187		47	100	72.25
N 9154		250	25	196.35
N 9321	5	13	100	44.30
N 9341		25	100	49.45
N 9171		47	100	82.40
N 9369	6	13	100	44.30
N 9425		25	100	50.50
N 9146		47	100	82.40
N 9173		142	50	175.25

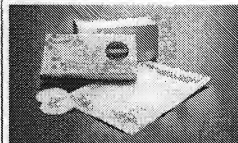
US \$

PRODUCT
NUMBER

US \$

Product Number	Pore Size (μ m)	Diameter (mm)	Pkg	Price US \$
N 9385	0.22	13	100	52.55
N 9385		25	100	46.95
N 9645		47	100	66.95
N 9770		142	50	141.15
N 9885	0.45	13	100	46.45
N 9145		25	100	45.35
N 9271		47	100	73.15
N 9521		142	50	155.55

TF-Miliopore membranes are Triton-free and have even lower water extractables than MF membranes.



FILTER MEMBRANES FOR MICROBIOLOGICAL ANALYSIS

Filter type HA, 0.45 μ m pore size, is designed to give complete retention and maximum recovery of total coliforms and fecal coliform bacteria. Complies with applicable U.S. EPA Standard methods and ASTM specifications for membrane filters used for drinking water analysis.

Filter type HC, 0.7 μ m pore size, is designed for improved recovery of stressed fecal coliform organisms, especially those found in chlorinated effluents. The larger pore size permits faster filtration if the water sample has a higher particulate burden. Both filters are Miliopore mixed cellulose esters (ICA + CNE).

S-PAK: filter membranes, sterile, individually sealed.

- 235,553-4** 0.45 μ m pore size (HA filter) 200 / pkg 80.00
White with black grid sur- 1,000 / pkg 289.00
face
- 235,554-2** 0.45 μ m pore size (HA filter) 200 / pkg 482.00
Black with white grid sur- 1,000 / pkg 355.00
face
- 235,555-0** 0.7 μ m pore size (HC filter) 200 / pkg 80.00
White with black grid sur- 1,000 / pkg 355.00
face

S-Kit: filter membrane plus absorbent pad, sterile, individually sealed, packed in 100's in dispenser tubes.

- 235,556-9** 0.45 μ m pore size (HA filter) 1,000 / pkg 310.00
White with black grid sur- face
- 235,557-7** 0.7 μ m pore size (HC filter) 200 / pkg 82.00
White with black grid sur- 1,000 / pkg 350.00
face
- 235,558-5** Absorbent pads, 47 mm diameter, without membrane, for use as filter support. 100 / pkg 25.00
200 / pkg 35.50

How to use price list - page 2.

Equipment, Books and Supplies are shipped FOB Sigma.

2179

TECHWARE

FILTRATION

PRODUCT
NUMBER

US \$

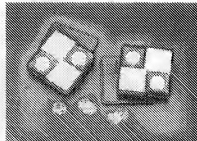
PRODUCT
NUMBER

US \$

FILTER MEMBRANES, NYLON

Nylon filters are naturally hydrophobic, and no wetting agents are used in manufacture. With an extractable level <0.0015 mg/cm², they are ideal for HPLC solvent and sample preparation. Because of high non-specific binding, they are not recommended for protein solutions. Autoclavable; unaffected by temperatures up to 180°C. Compatible with aqueous and most organic solvents.

Z29-082-3	Pore size: 0.2 µm Diameter: 25 mm	100 / pkg	49.10
Z29-080-7	Pore size: 0.22 µm Diameter: 47 mm	100 / pkg	73.35
Z29-081-5	Pore size: 0.45 µm Diameter: 25 mm	100 / pkg	54.50
Z29-079-3	Pore size: 0.45 µm Diameter: 47 mm	100 / pkg	73.35
Z29-078-5	Pore size: 0.45 µm Diameter: 90 mm	25 / pkg	43.75



FILTER MEMBRANES, ISOPORE TRACK-ETCHED POLYCARBONATE

Unique membrane for collection of particulates for inspection by light or electron microscopy. Isopore membranes have a flat, glossy, non-staining surface. They are hydrophobic, with a PVP wetting agent, and autoclavable. Thickness: 10±0.5 µm. Color: white.

Manufacturing process produces a membrane with precise pore size and narrow pore size distribution for accurate separations by particle size.

P 9199	Pore size: 0.2 µm Diameter: 25 mm	100 / pkg	42.25
P 9324	Pore size: 0.2 µm Diameter: 47 mm	100 / pkg	60.80
P 9449	Pore size: 0.4 µm Diameter: 25 mm	100 / pkg	42.25
P 9574	Pore size: 0.4 µm Diameter: 47 mm	100 / pkg	60.80
P 9699	Pore size: 5.0 µm Diameter: 25 mm	100 / pkg	54.60
P 9824	Pore size: 5.0 µm Diameter: 47 mm	100 / pkg	83.45

FILTER MEMBRANES, FLUOROPORE AND MITEX POLYTETRAFLUOROETHYLENE (PTFE)

Membranes of PTFE are biologically inert and have broad chemical compatibility. Fluoropore and Mitex are registered trademarks of Millipore Corp.

Product Number	Pore Size (µm)	Circle diam. (mm)	Pkg	Price US \$
Fluoropore PTFE membranes have a high-density polyethylene backing to improve handling. Compatible with solvents, acids, and bases (except aqueous hydrocarbons above 80°C).				
P 0325	0.2	75	100	177.26
P 0450		47	100	228.16
P 0575	0.5	13	100	148.14
P 0700		25	100	188.05
P 0825		47	100	233.85
P 0949	1.0	25	100	188.05
P 1200		47	100	244.75

Unlaminated Fluoropore PTFE membrane (no polyethylene backing) withstands even high-temperature aprotic solvents.

Mitex PTFE membranes are unlaminated and hydrophobic. Before use with aqueous solutions, they must be pre-wet with 50% methanol.

P 1075	5	47	100	275.65
P 0950	10	47	100	275.65

FILTER MEMBRANES, DURAPORE POLYVINYLIDENE DIFLUORIDE (PVDF)

Durapore PVDF membranes are ideal for sterilization and clarification of protein solutions. Protein binding on the order of 1 µg/cm², two orders of magnitude lower than nylon, nitrocellulose, or PTFE. Autoclavable to 125°C.

Excellent chemical compatibility (except ketones, esters, amines, trifluoroacetic acid). See also Immobilon-P and Immobilon-P[®] in the Electrophoresis Equipment section for PVDF blotting membranes. Durapore is a registered trademark of Millipore Corp.

Product Number	Pore Size (µm)	Diameter (mm)	Pkg	Price US \$
P 9074	0.10	47	100	85.50
P 1188	0.22	13	107	51.50
P 1213		25	100	51.50
P 1438		47	100	64.50
P 1563		142	50	215.50
Z35-871-1		253	25	206.00
P 1688	0.45	13	100	50.75
P 1813		25	100	50.75
P 1930		47	100	80.45
P 4313		142	50	206.05
Z35-870-3		229	25	214.70
P 8949	5	47	100	89.70

TECH

FILTR/

WHATMAN QUALITATIVE FILTER PAPERS

For general laboratory uses, including qualitative analytical techniques and chromatography. A range of papers with a variety of retention characteristics and flow rates are available. Weights are given in g/m² and in lb/30 in. x 36 in. Maximum grain: 1.0 µm.

Grade	Product Number	Product Weight (g/m ²)	Product Weight (lb/30 in. x 36 in.)	Product Diameter (mm)	Product Thickness (mm)	Product Retention (min)	Product Flow Rate (ml/min)	Product Price (US \$)
Grade 1	11	11	11	11	11	11	11	11
Grade 2	21	21	21	21	21	21	21	21
Grade 3	31	31	31	31	31	31	31	31
Grade 4	41	41	41	41	41	41	41	41
Grade 5	51	51	51	51	51	51	51	51
Grade 6	61	61	61	61	61	61	61	61
Grade 7	71	71	71	71	71	71	71	71
Grade 8	81	81	81	81	81	81	81	81
Grade 9	91	91	91	91	91	91	91	91
Grade 10	101	101	101	101	101	101	101	101
Grade 11	111	111	111	111	111	111	111	111
Grade 12	121	121	121	121	121	121	121	121
Grade 13	131	131	131	131	131	131	131	131
Grade 14	141	141	141	141	141	141	141	141
Grade 15	151	151	151	151	151	151	151	151
Grade 16	161	161	161	161	161	161	161	161
Grade 17	171	171	171	171	171	171	171	171
Grade 18	181	181	181	181	181	181	181	181
Grade 19	191	191	191	191	191	191	191	191
Grade 20	201	201	201	201	201	201	201	201
Grade 21	211	211	211	211	211	211	211	211
Grade 22	221	221	221	221	221	221	221	221
Grade 23	231	231	231	231	231	231	231	231
Grade 24	241	241	241	241	241	241	241	241
Grade 25	251	251	251	251	251	251	251	251
Grade 26	261	261	261	261	261	261	261	261
Grade 27	271	271	271	271	271	271	271	271
Grade 28	281	281	281	281	281	281	281	281
Grade 29	291	291	291	291	291	291	291	291
Grade 30	301	301	301	301	301	301	301	301
Grade 31	311	311	311	311	311	311	311	311
Grade 32	321	321	321	321	321	321	321	321
Grade 33	331	331	331	331	331	331	331	331
Grade 34	341	341	341	341	341	341	341	341
Grade 35	351	351	351	351	351	351	351	351
Grade 36	361	361	361	361	361	361	361	361
Grade 37	371	371	371	371	371	371	371	371
Grade 38	381	381	381	381	381	381	381	381
Grade 39	391	391	391	391	391	391	391	391
Grade 40	401	401	401	401	401	401	401	401
Grade 41	411	411	411	411	411	411	411	411
Grade 42	421	421	421	421	421	421	421	421
Grade 43	431	431	431	431	431	431	431	431
Grade 44	441	441	441	441	441	441	441	441
Grade 45	451	451	451	451	451	451	451	451
Grade 46	461	461	461	461	461	461	461	461
Grade 47	471	471	471	471	471	471	471	471
Grade 48	481	481	481	481	481	481	481	481
Grade 49	491	491	491	491	491	491	491	491
Grade 50	501	501	501	501	501	501	501	501
Grade 51	511	511	511	511	511	511	511	511
Grade 52	521	521	521	521	521	521	521	521
Grade 53	531	531	531	531	531	531	531	531
Grade 54	541	541	541	541	541	541	541	541
Grade 55	551	551	551	551	551	551	551	551
Grade 56	561	561	561	561	561	561	561	561
Grade 57	571	571	571	571	571	571	571	571
Grade 58	581	581	581	581	581	581	581	581
Grade 59	591	591	591	591	591	591	591	591
Grade 60	601	601	601	601	601	601	601	601
Grade 61	611	611	611	611	611	611	611	611
Grade 62	621	621	621	621	621	621	621	621
Grade 63	631	631	631	631	631	631	631	631
Grade 64	641	641	641	641	641	641	641	641
Grade 65	651	651	651	651	651	651	651	651
Grade 66	661	661	661	661	661	661	661	661
Grade 67	671	671	671	671	671	671	671	671
Grade 68	681	681	681	681	681	681	681	681
Grade 69	691	691	691	691	691	691	691	691
Grade 70	701	701	701	701	701	701	701	701
Grade 71	711	711	711	711	711	711	711	711
Grade 72	721	721	721	721	721	721	721	721
Grade 73	731	731	731	731	731	731	731	731
Grade 74	741	741	741	741	741	741	741	741
Grade 75	751	751	751	751	751	751	751	751
Grade 76	761	761	761	761	761	761	761	761
Grade 77	771	771	771	771	771	771	771	771
Grade 78	781	781	781	781	781	781	781	781
Grade 79	791	791	791	791	791	791	791	791
Grade 80	801	801	801	801	801	801	801	801
Grade 81	811	811	811	811	811	811	811	811
Grade 82	821	821	821	821	821	821	821	821
Grade 83	831	831	831	831	831	831	831	831
Grade 84	841	841	841	841	841	841	841	841
Grade 85	851	851	851	851	851	851	851	851
Grade 86	861	861	861	861	861	861	861	861
Grade 87	871	871	871	871	871	871	871	871
Grade 88	881	881	881	881	881	881	881	881
Grade 89	891	891	891	891	891	891	891	891
Grade 90	901	901	901	901	901	901	901	901
Grade 91	911	911	911	911	911	911	911	911
Grade 92	921	921	921	921	921	921	921	921
Grade 93	931	931	931	931	931	931	931	931
Grade 94	941	941	941	941	941	941	941	941
Grade 95	951	951	951	951	951	951	951	951
Grade 96	961	961	961	961	961	961	961	961
Grade 97	971	971	971	971	971	971	971	971
Grade 98	981	981	981	981	981	981	981	981
Grade 99	991	991	991	991	991	991	991	991
Grade 100	1001	1001	1001	1001	1001	1001	1001	1001

LTRATION

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49.10
73.35
34.50
73.35
13.75

FILTER MEMBRANES, FLUOROPORE AND MIXED POLYETRAFLUOROETHYLENE (PTFE)

Membranes of PTFE are biologically inert and have broad chemical compatibility.
Fluoropore and Mix are registered trademarks of Millipore Corp.

Product Number	Pore Size (µm)	Circle diam. (mm)	Phi	Phi (100)
Fluoropore PTFE membranes have a high density polyethylene backbone to improve handling. Compatible with solvents, acids, and bases (except organic acids above 80°C).				
P 0325	0.2	25	100	100
P 0450		47	100	100
P 0575	0.5	13	100	100
P 0700		25	100	100
P 0825		47	100	100
P 0945	1.0	25	100	100
P 0200		47	100	100

Unfluorinated Fluoropore PTFE membranes (no polyethylene backing) stand even high-temperature organic solvents.

Mixed PTFE membranes are unfluorinated and hydrophobic. Better use with aqueous solutions, they must be pre-wet with, e.g., methanol.

Product Number	Pore Size (µm)	Circle diam. (mm)	Phi	Phi (100)
P 1205	0.5	47	100	100
P 075	5	47	100	100
P 0950	10	47	100	100

FILTER MEMBRANES, DURAPORE POLYVINYLIDENE DIFLUORIDE (PVDF)

Durapore PVDF membranes are ideal for sterilization and clarification of protein solutions. Protein binding on the order of 1 µg/cm², two orders of magnitude lower than nylon, nitrocellulose, or PTFE. Autoclavable to 135°C.

Excellent chemical compatibility (except ketones, esters, amines, trifluoroacetic acid).

See also Immobilon-P and Immobilon-B in the Electrophoresis Equipment section for PVDF filters.

Durapore is a registered trademark of Millipore Corp.

Product Number	Pore Size (µm)	Diameter (mm)	Phi	Phi (100)
P 0074	0.10	47	100	100
P 1188	0.22	13	100	100
P 1313		25	100	100
P 1438		47	100	100
P 1563		142	50	100
Z35-871-1		293	25	100
P 1698	0.45	13	100	100
P 1813		25	100	100
P 1938		47	100	100
P 4513		142	50	100
Z35-870-3		293	25	100
P 0849	5	47	100	100

WHATMAN QUALITATIVE FILTER PAPERS

For general laboratory use, including qualitative and quantitative separations. A range of papers with a variety of retention characteristics and flow rates are available. Whatman qualitative papers have a small quantity of a weakly acidic.

Maximum rate 0.08 in.

Maximum rate 0.08 in.

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FILTRATION

Product Number	Pore Size (µm)	Circle diam. (mm)	Phi	Phi (100)
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